

WHAT IS CLAIMED IS:

1. An image processor comprising:
  - a dividing unit which divides image data into  $m \times n$  pixels, having  $n$  lines with  $m$  pixels per one line;
  - 5 a storage unit which stores the image data of pixels, which are divided by said dividing unit;
  - a control unit which provides a control so as to send the image data of pixels divided by said dividing unit, and the image data stored by said storage unit, respectively,
  - 10 to a predetermined destination;
  - a compression unit which batch compresses the image data of  $m \times n$  pixels,
  - wherein said control unit sends  $(n-1)$  lines of image data among the image data of  $m \times n$  pixels divided by said
  - 15 dividing unit to said storage unit, and the remaining one line of image data directly to said compression unit; and controls sending of the image data of  $m \times (n-1)$  pixels stored in said storage unit to said compression unit.
- 20 2. The image processor according to claim 1, wherein said storage unit comprises  $(n-1)$  number of FIFO (first-in first-out) memories, and
- said control unit controls sending of each line of the image data divided by said dividing unit to said FIFO
- 25 memories, respectively.

3. An image processor comprising:  
an expansion unit which batch expands compressed data,  
that is, of compressed image data of  $m \times n$  pixels;  
a storage unit which stores expanded image data by  
5 said expansion unit;  
a control unit that provides a control so as to send  
the expanded image data by said expansion unit to a  
predetermined destination, and the image data stored by said  
storage unit to a predetermined output destination,  
10 wherein said control unit sends one line of image data,  
which are expanded by said expansion unit, and comprise  $m$   
pixels per one line, directly to said predetermined output  
destination, and image data with the remaining  $(n-1)$  lines  
of pixels to said storage unit; and then controls sending  
15 of the image data with  $(n-1)$  lines of pixels stored in said  
storage unit to said predetermined output destination.

4. The image processor according to claim 3, wherein  
said storage unit comprises  $(n-1)$  number of FIFO  
20 memories, and  
said control unit controls sending of each line of  
the image data expanded by said expansion unit to said FIFO  
memories, respectively.

5. An image processor comprising:

- an input unit which inputs compressed data of image data compressed every image data of  $m \times n$  pixels;
- an expansion unit which batch expands compressed data input by said input unit to the image data of  $m \times n$  pixels;
- an extraction unit which extracts one line of image data, which comprise  $m$  pixels per one line, from image data of  $m \times n$  pixels expanded by said expansion unit;
- an output unit which outputs one line of image data extracted by said extraction unit;
- a detection unit which detects whether one line of the image data has been output or not by said output unit; and
- a control unit that provides a control so as of said input and extraction unit,

wherein said control unit inputs the compressed data including the image data again by control of said input unit, when the output of the image data is detected by said detection unit; extracts one line of image data which have not been previously extracted by said extraction unit; and image data of the one line to the  $n$  line are sequentially output by repetition of such control.

6. An image processor comprising:

a dividing means for dividing image data into  $m \times n$  pixels, having  $n$  lines with  $m$  pixels per one line;

a storage means for storing the image data of pixels,  
5 which are divided by said dividing means;

a control means for providing a control so as to send the image data of pixels divided by said dividing means, and the image data stored by said storage means, respectively, to a predetermined destination;

10 a compression means for batch compressing the image data of  $m \times n$  pixels,

wherein said control means sends  $(n-1)$  lines of image data among the image data of  $m \times n$  pixels divided by said dividing means to said storage means, and the remaining one  
15 line of image data directly to said compression means; and controls sending of the image data of  $m \times (n-1)$  pixels stored in said storage means to said compression means.

7. The image processor according to claim 6, wherein

20 said storage means comprises  $(n-1)$  number of FIFO (first-in first-out) memories, and

said control means controls sending of each line of the image data divided by said dividing means to said FIFO memories, respectively.

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8. An image processor comprising:

an expansion means for batch expanding compressed data,  
that is, of compressed image data of  $m \times n$  pixels;

a storage means for storing expanded image data by  
5 said expansion means;

a control means for providing a control so as to send  
the expanded image data by said expansion means to a  
predetermined destination, and the image data stored by said  
storage means to a predetermined output destination,

10 wherein said control means sends one line of image  
data, which are expanded by said expansion means, and  
comprise  $m$  pixels per one line, directly to said  
predetermined output destination, and image data with the  
remaining  $(n-1)$  lines of pixels to said storage means; and  
15 then controls sending of the image data with  $(n-1)$  lines  
of pixels stored in said storage means to said predetermined  
output destination.

9. The image processor according to claim 8, wherein

20 said storage means comprises  $(n-1)$  number of FIFO  
memories, and

said control means controls sending of each line of  
the image data expanded by said expansion means to said FIFO  
memories, respectively.

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10. An image processor comprising:  
an input means for inputting compressed data of image  
data compressed every image data of  $m \times n$  pixels;  
an expansion means for batch expanding compressed data  
5 input by said input means to the image data of  $m \times n$  pixels;  
an extraction means for extracting one line of image  
data, which comprise  $m$  pixels per one line, from image data  
of  $m \times n$  pixels expanded by said expansion means;  
an output means for outputting one line of image data  
10 extracted by said extraction means;  
a detection means for detecting whether one line of  
the image data has been output or not by said output means;  
and  
a control means for providing a control so as of said  
15 input and extraction means,  
wherein said control means inputs the compressed data  
including the image data again by control of said input means,  
when the output of the image data is detected by said detection  
means; extracts one line of image data which have not been  
20 previously extracted by said extraction means; and image  
data of the one line to the  $n$  line are sequentially output  
by repetition of such control.

11. An image processing method comprising the steps of:  
25 dividing image data into  $m \times n$  pixels, having  $n$  lines

with  $m$  pixels per one line;

storing the image data of pixels, which are divided  
by said dividing step;

providing a control so as to send the image data of  
5 pixels divided by said dividing step, and the image data  
stored by said storing step, respectively, to a predetermined  
destination;

batch compressing the image data of  $m \times n$  pixels,  
wherein said providing step sends  $(n-1)$  lines of image  
10 data among the image data of  $m \times n$  pixels divided by said  
dividing step to said storing step, and the remaining one  
line of image data directly to said compressing step; and  
controls sending of the image data of  $m \times (n-1)$  pixels stored  
in said storage step to said compressing step.

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12. An image processing method comprising the steps of:

batch expanding compressed data, that is, of  
compressed image data of  $m \times n$  pixels;

storing expanded image data by said expanding step;

20 providing a control so as to send the expanded image  
data by said expanding step to a predetermined destination,  
and the image data stored by said storing step to a  
predetermined output destination,

wherein said providing step sends one line of image  
25 data, which are expanded by said expanding step, and comprise

m pixels per one line, directly to said predetermined output destination, and image data with the remaining (n-1) lines of pixels to said storing step; and then controls sending of the image data with (n-1) lines of pixels stored in said  
5 storing step to said predetermined output destination.

13. An image processing method comprising the steps of:

inputting compressed data of image data compressed every image data of  $m \times n$  pixels;

10 batch expanding compressed data input by said inputting step to the image data of  $m \times n$  pixels;

extracting one line of image data, which comprise m pixels per one line, from image data of  $m \times n$  pixels expanded by said expanding step;

15 outputting one line of image data extracted by said extracting step;

detecting whether one line of the image data has been output or not by said outputting step; and

providing a control so as of said inputting and  
20 extracting steps,

wherein said providing step inputs the compressed data including the image data again by control of said inputting step, when the output of the image data is detected by said detecting step; extracts one line of image data which have  
25 not been previously extracted by said extracting step; and



image data of the one line to the n line are sequentially  
output by repetition of such control.